

ADAPTATION OF STATISTICAL PARSERS
BASED ON MATHEMATICAL TRANSFORM

Abstract of the Disclosure

An arrangement for adapting statistical parsers to new data using a mathematical
5 transform, particularly a Markov transform. In particular, it is assumed that an initial
statistical parser is available and a batch of new data is given. The initial model is mapped
to a new model by a Markov matrix, each of whose rows sums to one. In the
unsupervised setup, where “true” parses are missing, the transform matrix is obtained by
maximizing the log likelihood of the parses of test data decoded using the model before
10 adaptation. The proposed algorithm can be applied to supervised adaptation, as well.